MIL-C-60617A (MU)
31 July 1968
SUPERSEDING
MIL-C-60617 (MU)
3 February 1967

MILITARY SPECIFICATION CARTRIDGE, 7.62MM: NATO, ARMOR PIERCING, M61

1. SCOPE

1.1 This specification covers Cartridge, 7.62MM: NATO, Armor Piercing, M61 for use in 7.62mm weapons.

2. APPLICABLE DOCUMENTS

2.1 The following documents of the Issue in effect on date of invitation for bids or request for proposal, form a part of the specification to the extent specified herein.

STANDARDS

Federal

Federal Test Method Standard No. 151 - Metals; Test Methods

Military	
MIL-STD-105	 Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-109	- Quality Assurance Terms and Definitions
MIL-STD-636	 Visual Inspection Standards for Small Arms Ammunition through Caliber .50
MIL-STD-644	 Visual Inspection Standards and Inspection Procedures for Inspection of Packaging, Packing and Marking of Small Arms Ammunition
MIL-STD-1170	 Visual Standards and Comparison Methods for Evaluating Grain Configuration in 7.62mm Cartridge Cases

DRAWINGS

U.S. Army Munitions Command

F7553708 - Packing and Marking, Cartridges, 7.62mm,
NATO; Cartons; Box, Ammunition, M19A1;
Box, Wirebound

2.1 DRAWINGS (Cont'd)

U.S. Army Munitions Co	ommand
F7553747	Packing and Marking, Cartridges, 7.62mm, NATO; Cartons; Box, Ammunition, M2A1;
07.61-2.674	Box, Wirebound
C76h3674	Classification of Cartridge Case Defects
D10521856	Symbols, Identification Marking; NATO; Boxes, Wirebound, Boxes Ammunition, M19A1 and M2A1
C10521857	Symbols, Interchangeability
F10521861	Packing and Marking, Cartridges, 7.62mm, NATO; Linked; Cartons; Bandoleers; Box, Ammunition, M19A1; Box, Wirebound
C7553704	Cartridge, 7.62mm, NATO, Armor Piercing, M61
F10535780	Packing, Cartridges, 7.62mm, Linked, Shipping and Storage Container, M548 (Functional)
F10535781	Marking, Cartridges, 7.62mm, Linked, Shipping and Storage Container, M548 (Functional)
IEL-7553704	Inspection Equipment List for Cartridges, 7.62mm, NATO, Armor Piercing, M61
PUBLICATION	
AMCR 715-505 Volume 3	Ammunition Ballistic Acceptance Test Methods, Volume 3, Test Procedures for 7.62mm Cartridges

(Copies of specifications, standards, drawings and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

3. REQUIREMANTS

- 3.1 <u>General</u>.- The cartridge shall comply with Drawing C7553704, referenced specifications and the following:
- $3.2~{
 m Bullet~extraction}$.— The force required to extract the bullet from the cartridge case shall be not less than 60 pounds.

- 3.3 <u>Residual stress.</u>- The cartridge case shall not split when subjected to a one percent mercurous nitrate solution for 15 minutes.
- 3.4 <u>Waterproof.</u> The cartridge shall not release more than one bubble of air when subjected to a pressure differential of 7½ pounds per square inch (psi) for 30 seconds.
- 3.5 <u>Accuracy</u>. The average of the mean radii of all targets of the sample cartridges, fired in standard accuracy test weapons, over a range of 600 yards, shall not exceed 7.50 inches.
- 3.6 Action time. The action time (overall primer ignition, propellant burning and bullet-barrel time) of the cartridge shall not exceed 4 milliseconds.
- 3.7 <u>Velocity</u>.- The average velocity of the sample cartridges, conditioned at 68° to 72" Fahrenheit (F), shall be 2,750 feet per second (ft/sec) plus or mimus 30 ft/see, at 78 feet from the muzzle of the weapon. The standard deviation of the velocities shall not exceed 32 ft/sec.
- 3.8 Chamber pressure.— The average chamber pressure of the sample cartridges, conditioned at 68° to 72°F, shall not exceed 50,000 psi. Neither the chamber pressure of an individual sample cartridge, nor the average chamber pressure of the sample cartridges plus three standard deviations of chamber pressure, shall exceed 55,000 psi.
- 3.9 <u>Temperate test</u>. The chamber pressure, velocity and function and casualty requirements of the sample cartridges subjected to each of the following storage conditions shall be as noted in the applicable sub-paragraphs:

Stored at 125°F for 4 hours and fired at that temperature.

Stored at -65°F for not less than 6 hours and fired at that temperature.

- 3.9.1 <u>Chamber pressure.</u>— The average chamber pressure of the sample cartridge subjected to high and low temperature storage conditions shall not exceed 55,000 Psi nor vary from the average chamber pressure of the sample cartridge of the same lot conditioned at 68° to 72°F by more than plus (+) 7500 or minus (-) 15,000 psi.
- 3.9.2 <u>Velocity</u>.- The average velocity of the sample cartridge subjected to high and low temperature storage conditions shall not vary from the average velocity of the sample cartridges of the same lot conditioned at 68° to 72° F by more than plus (+) 150 or minus (-) 250 ft/sec.

- 3.9.3 Function and casualty. The sample cartridges subjected to high and low temperature storage conditions shall function without casualty.
- 3.10 Function and casualty. The cartridge shall function without casualty at ambient temperature.
- The average port pressure of the sample cartridges, conditioned at 68° to 72°F, shall be 12,500 \pm 2,000 psi.
- 3.12 Penetration. The bullet of the cartridge shall pass completely through a 10 gauge (0.135 inches) mild steel plate (SAE-1010 or SAE-1020 with a hardness of Rockwell B55 to Rockwell B90) at a range of 1200 yards.
- 3.13 <u>Stripping.</u>- The jacket of the bullet, or any part thereof, shall not strip from the slug when the cartridge is fired.
- $3.14~{\rm Barrel~erosion.}$ The average life per barrel of 3 barrels shall be not less than $5,000~{\rm rounds.}$ The barrel life shall be considered as having ended when the average velocity of an individual burst in the test drops 200 ft/sec or more with respect to that of the initial burst in the test or when the bullets from twenty percent or more of the cartridges in any burst show keyholing which is defined as yaw exceeding 15° at 1,000 inches range, whichever comes first.
- 3.15 <u>Grain configuration</u>. The grain configuration of the sidewall of the finished cartridge case shall fall within the range defined by the grain configuration standards illustrated in MIL-STD-1170, Figures 1 through 6.
- 3.16 Workmanship. The requirements for workmanship are as specified on the applicable drawings, referenced specifications and the following:
- 3.16.1 Metal defects. The cartridge shall be free of corrosion, stains, discolorations, dirt, oil and smears of lacquer.
- 3.16.2 Foreign matter. The cartridge shall be free of corrosion, stains, discolorations, dirt, oil and smears of lacquer.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection.— Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Quality assurance terms and definitions. - Reference shall be made to MIL-STD-109 for definition of quality assurance terms.

4.2 First article sample.

- 4.2.1 <u>Initial production sample.</u> At the beginning of regular production, a sample shall be submitted in accordance with contract requirements and shall consist of 20,000 cartridges. The sample shall be manufactured using the same materials, equipment, processes and procedures as will be used in regular production. All parts and materials, including packaging and packing, shall be the same as used for regular production and shall be obtained from the same source of supply.
- 4.2.1.1 Examination and test. After inspection and provisional acceptance at source, the sample shall be inspected for all requirements of the drawings and specifications at a government laboratory or such other facility specified in the contract.
- 4.2.1.2 <u>Initial production sample failure</u>.- Failure of the sample to comply with requirements of the drawings and specifications shall result in sample disapproval.
 - 4.3 Inspection provisions.

4.3.1 Lot.

- 4.3.1.1 <u>Submission of product</u>. The product shall be submitted in accordance with MIL-STD-105.
- 4.3.1.2 Lot identification.— Each lot of ammunition shall be identified as to type, caliber and model, as well as with a lot number and the manufacturer's identification as assigned by the procuring activity. Each lot shall be further identified by a federal stock number assigned by the procuring activity.
- 4.3.2 Examination.— One hundred percent examination shall be performed for all critical defects. Examination for major and minor defects shall be performed on a class basis in accordance with the classification of defects, Table I, using applicable sampling plans and acceptance criteria of MIL-STD-105. The acceptable quality level (AQL) for the major class shall be 0.25 percent and the AQL for the minor class shall be 1.50 percent. All non-conforming cartridges shall be rejected.
- 4.3.2.1 Classification of defects. The classification of defects shall be as specified in Table I.

4.3.2.1 (Cont'd)

TABLE I

No.	Defect and Method of Inspection Visual 1/	Critical	<u>Major</u>	Minor	Major or <u>Minor</u>
1	Cartridge Discolored, dirty, oily, smeared			х	
2	Corroded or stained, if etched Case		X		
4	Round head		Х		
5	Dent				х
6	Split case				
	in K, L or M location	Х	1.		
7	in I, S or J location Perforated case	Х	X		
8	Draw scratch	Λ			Х
9	Scratch			Х	21
10	Beveled underside of head		Х		
11	Case mouth not crimped in cannelure		X		
12 13	Scaly metal.				X
14	No chamfer on head (rim) Fold		X	х	
15	Wrinkle			X	
16	Buckle			X	
17	Bulge			Х	
18	Illegible or missing head stamp			X	
19	Defective head			X	
20 21	Defective mouth No visible evidence of mouth anneal		**	X	
21	Bullet		X		
22	Dent			х	
23	Scratch			Х	
24	Split bullet jacket		X		
25	Loose bullet		X		
26	Missing cannelure		X		
27 28	Scaly metal (bullet)			••	X
20 29	Upset (crooked) point Exposed steel (clad jacket)			X X	
30	Blunt point			X	
31	Defective cannelure			X	

4.3.2.1 (Cont'd)

TABLE I (Cont'd)

No.	Defect and Method of Inspection	Critical	<u>M</u> ajor	_Minor	Major or Minor_
	Primer				
32	No primer	X			
33	Cocked primer	X			
34	Inverted primer	X			
35	Loose primer		X		
36	Nicked or dented primer			X	
37	No waterproofing material				
	(primer pocket joint)			X	
38	Defective crimp			X	
	Gaging				
39	Total length		X		
40	Cartridge profile failure		"		
	(requiring more than 20 lbs dead				
	weight to insert in profile and				
	alignment gage)		X		
41	Diameter of extractor groove, max.		X		
42	Diameter of extractor groove, min.			X	
43	Diameter of head		X		
44	Thickness of head		X		
45	Length to shoulder datum		X		
46	Depth of primer		X		
	Weighing				
47	Weight, min. 2/	X			

^{1/} Refer to MIL-STD-636 for visual defect standards for defects 1 thru 38.

^{2/} Each lightweight cartridge shall be disassembled and the propellant weighed. Each such cartridge found to contain 25 grains or more of propellant shall be classed as a major defect. Any cartridge containing less than 25 grains of propellant shall be classed as a critical defect.

^{4.3.3} Tests.- The tests listed in Table II shall be conducted in accordance with the methods and procedures specified in 4.4.

4.3.3.1 Test samples. - The quantities for the various tests shall be as specified in Table II. Only cartridges having met the visual, dimensional and weight requirements shall be used in the ballistic tests, and shall have been selected in such a manner that the sample lot 1 The cartridges shall be thoroughly mixed pies for the various tests.

TABLE II Number of Cartridges

<u>Test</u>	Ambient Temper- ature	70° +2° <u>F</u>	Low Temperature (See 4.4.8.1)	High Temperature (See 4.4.8.2)	Require- ment Paragraph
Bullet Extraction 1/	25				3.2
Residual stress	-/				2.2
(mercurous nitrate) 1	./ 50				3.3 3.4
Waterproof 2/	50				J• *
Accuracy 3	90				3.5 3.6
Action time 1/		50	20	20	3.7 & 3.9.2
Velocity 4/		20	20	20	3.8 & 3.9.1
Chamber Pressure 4/		20	20	20	3.9.3 & 3.10
Function & Casualty 5/					•
Gun, Machine, 7.62mm	, 200		100	100	
M60	300 120		80	80	
Rifle, 7.62mm, M14			•		
Rifle, (IAR), 7.62mm	, 120		80	80	
FN 7.60 V51.4			80	80	
Rifle, 7.62mm, X51, Gun, Machine, 7.62mm					
Mle 1952	300		100	100	
Rifle, 7.62mm, LIA1	120		80	80	3.11
Port Pressure 3		20			3.12
Penetration 6	10				3.13
Stripping 6			==		3.14
Barrel Erosion 6/	15,000				3.15
Grain Configuration	10				•
Hardness	30				Drawing
Head $1/$	10				Drawing
Sidewall 3/	10				

^{1/} Failure of two or more cartridges to comply with the applicable requirement shall be cause for rejection of the lot. If one cartridge fails in the first test, a second sample consisting of double the number of cartridges in the first sample shall be tested. If any failing cartridges are found in the second sample, the lot shall be rejected.

4.3.3.1 (Cont'd)

- 2/ Failure of ten or more cartridges to comply with the applicable requirement shall be cause for rejection of the lot. If more than three but less than ten cartridges fail in the first test, a second sample consisting of double the number of cartridges in the first sample shall be tested. The lot shall be rejected if in the combined first and second sample, ten or more cartridges fail to comply with the applicable requirement.
- 3/ Failure of the cartridges to comply with the applicable requirement shall be cause for rejection of the lot subject to testing of a second sample consisting of double the quantity of cartridges used in the first test. Failure of the cartridges in the second sample to comply with the applicable requirement shall be cause for rejection of the lot.
- 4/ Failure of the cartridges in any sample to comply with the applicable requirement shall be cause for rejection of the lot subject to testing of a second sample consisting of double the quantity of cartridges used in the first test for the temperature or temperatures at which the failure occurred. Failure of the cartridges of the second sample to comply with the applicable requirement shall be cause for rejection of the lot.
- 5/ The initial production sample or production lot shall be rejected when function and casualty defects plus firing defects observed in all other firing tests (excluding erosion tests) exceed the acceptance number for the cumulative sample in Table III. If the number of defects found in the first tests (excluding erosion tests) exceeds the acceptance number for the first sample, but is equal to or less than the acceptance number for the cumulative sample, a second sample, consisting of double the quantities specified under fiction and casualty test, shall be fired in all the service weapons specified therefor. This procedure shall apply regardless of the weapon or weapons in which the firing defects occurred in the first test. If the total number of defects in the combined first and second sample exceeds the acceptance number for the cumulative sample, the lot shall be rejected. If, in testing a second sample, defects other than those for which the second sample is being tested should occur to the extent that they exceed the acceptance number for the cumulative sample, the lot shall be rejected.
- 6/ This test shall be conducted on the initial production sample only. Determination of compliance with the bullet stripping requirement shall be made during the function and casualty test.

 $4.3.3.2\ \underline{Firing\ defects}$.- Firing defects and acceptance numbers shall be as specified in Table III.

TABLE III

		Acceptance Number		
			Cumulative	
		First	(First & Second	
	Defects	Sample 5/	Sample) 5/	
٥				
1.	Misfire 6/	^		
	a. No vent hole or obstruction	0	-	
	in the vent area	7	0	
•	b. Other	1	2	
2.	Bullet remaining in bore 1/	U	-	
3.	Primer leak a. Perforation in firing pin indent			
	in primer cup			
	(1) Machine guns (other than M60)	9	24	
	(2) Rifles (other than M14)	ź	5	
	(3) Machine gun, M60 2/	Ō	-	
	(4) Rifle, M14 2/	0	•	
	b. Escape of gas through primer cup			
	other than 3a.	l	2	
	c. Escape of gas around primer cup			
	(1) 50% or more than 50% of		1	
	periphery	21 (11)	48 (22)	
	(2) Less than 50% of periphery	45 (22)	109 (47)	
	d. Blown primer or primer falls out		_	
	of pocket on retraction of bolt	0	1	
	e. Primer remains in pocket but is	- (-)	= (a)	
	physically loose	2 (1)	5 (2)	
4.	Case casualties			
	a. Longitudinal split 3/	h= (00)	109 (47)	
	(1) Neck and shoulder (I or S)	45 (22)	6 (3)	
	(2) Body (J)	3 (2) 1	2	
	(3) Body (K)	0	1	
	(4) To head (L)	0	1	
	(5) Through head (M)	O	-	
	b. Circumferential rupture 3/ (1) Partial, shoulder or body (J & S) 1	2	
	(1) Partial, shoulder or body (J & S(2) Partial, Body (K)	, 0	ī	
	(3) Partial, Head (L)	ŏ	ī	
	(4) Complete	Ö	ĩ	
	(4) Compress	•	_	

4.3.3.2 (Cont'd)

TABLE III (Cont'd)

Acceptance Number

Defects	First Sample <u>5</u> /	Cumulative (First & Second Sample) <u>5</u> /
5. Failure to extract 6. Weapon stoppage 4/	O O	1 1
Total of defects 3.a.(1), 3.a.(2), 3.c.(1), 3.c.(2), and 4.a.(1) Total of all other listed defects	69 (34) 8 (6)	174 (74) 21 (12)

- 1/ No second sample permitted. Lot shall be rejected.
- 2/ If one or more defects are found in the first sample, a second sample shall be fired in the weapon(s) in which the defect occurred. The second sample shall consist of double the quantity of cartridges specified under function and casualty of Table II for such weapon(s). Prior to the testing of the second sample, the firing pin of the specific weapon(s) in which the defect originally occurred shall be replaced by a new firing pin. If an additional primer perforation is found in the second sample, the lot shall be rejected.
- 3/ For location of defects indicated by letters in parentheses, see Drawing C7643674.
- 4/ All stoppages attributable to the ammunition, with the exception of misfire, complete rupture or failure to extract, observed in all tests shall be included.
- 5/ Numbers in parentheses indicate acceptance numbers to be applied during reduced testing when function and casualty testing is conducted only in Machine Gun, M60 and Rifle, M14.
- 6/ Each cartridge that misfires shall be disassembled and examined for presence of vent hole in primer pocket or any obstruction, that can be assignable as the cause for misfire, in the vent hole area of the primer pocket. If vent hole is missing or obstructed, the lot shall be rejected with no second sample permitted.

- 4.3.4 <u>Packaging</u>, <u>packing</u> and <u>marking</u> <u>inspection</u>.—During or immediately prior to the packaging operation, 100 percent examination of the cartridges shall. be performed to ascertain that the cartridge type conforms to the drawing. Occurrence of a high pressure test, dummy, blank or grenade cartridge shall be classed as a critical defect. Occurrence of any incorrect type other than those listed shall be classed as a major defect. All non-conforming cartridges shall be rejected. Inspection for packaging, packing and marking shall. be in accordance with MIL-STD-644 as applicable to the drawing.
- 4.3.5 Inspection equipment.— The examination and tests shall be made using the equipment listed on IEL-7553704. The reference cartridge to be used shall be loaded with propellant of the same type as the propellant loaded into the production cartridge; Simulated assessment of reference cartridge shall be in accordance with AMCR 715-505, Volume 3.

4.4 Test methods and procedures.

- 4.4.1 <u>Bullet extraction</u>. The cartridges shall be tested in an approved bullet extractor machine. The rate of travel of the test head shall be not less than three nor more than six inches per minute. The test shall be conducted in accordance with AMCR 715-505, Volume 3.
- 4,4.2 Residual stress (mercurous nitrate). Tests shall be conducted in accordance with AMCR 715-505, Volume 3.
- 4.4.3 Waterproof. The test shall be conducted in accordance with AMCR 715-505, Volume 3. The container shall be evacuated to a pressure of 7½ pounds per square inch (15 inches of mercury) below atmospheric pressure, and held at that pressure for 30 seconds.
- 4.4.4 Accuracy. The test shall be conducted in accordance with AMCR 715-505, Volume 3, utilizing the longest range available up to 600 yards. Ranges shorter than 200 yards shall not be used. When accuracy testing is conducted on ranges shorter than 600 yards, the average of the mean radii of the targets shall be multiplied by the applicable conversion factor given below:

Range (yards)	200	300	400	500
Factor	3.28	2.18	1.64	1.31

- 4.4.5. <u>Action time</u>. The test shall be conducted in accordance with AMCR 715-505, Volume 3.
- 4.4.6 <u>Velocity.</u> The tests shall be conducted in accordance with AMCR 715-505, Volume $3_{\scriptscriptstyle 0}$

- 4.4.7 Chamber pressure. The tests shall be conducted in accordance with AMCR 715-505, Volume 3.
- 4.4.8 <u>Temperature tests.</u> The tests shall be conducted in accordance with AMCR 715-505, Volume 3. The weapon or weapons in which these tests are fired shall be at room temperate. Velocity and pressure differences shall be determined by firing twenty cartridges, conditioned at 68° to 72°F, for a minimum of two hours, from the same lot of ammunition, immediately prior to firing the cartridges conditioned as specified below.
- $4.4.8.1 \; \underline{\text{Low temperature tests.}}$ The test sample shall be stored at minus 65 degrees F., plus or minus 5 degrees F., for not less than 6 hours and shall be fired at that temperature.
- $4.4.8.2~{
 m High~temperature~tests}$.— The test sample shall be stored at 125 degrees F., plus or minus 2 degrees F., for not less than 4 hours and shall be fired at that temperature.
- 4.4.9 Function and casualty test.— The test shall be conducted in accordance with AMCR 715-505, Volume 3. One weapon of each type shall be used and the following number of cartridges shall be fired in each weapon:

	<u>Rifle</u>	Machine Gun
Ambient Temperature	120	300 100
Low Temperature High Temperature	80	100

- 4.4.9.1 Reduced testing for function and casualty.— When five consecutive production lots have successfully met the criteria of Table III, testing for function and casualty shall be reduced. The reduced plan shall consist of testing one out of every five lots in all the weapons prescribed in Table II, using the sample quantities specified therein. The lots to be tested in this manner shall be selected randomly. The remaining four lots shall be tested only in Gun, Machine, 7.62mm, M60 and Rifle, 7.62mm, M14, using sample quantities specified therefor in Table II. Failure of any lot to meet acceptance criteria of Table III during reduced testing shall be cause for reinstatement of lot-by-lot testing in all prescribed weapons. When five consecutive lots thereafter have met the criteria of Table III, the reduced testing described above shall be resumed.
- 4.4.10 <u>Port pressure</u>. The test shall be conducted in accordance with AMCR 715-505, Volume 3.
- 4.4.11 Penetration. The test shall be conducted in accordance with AMCR 715-505, Volume 3.

- 4.4.12 Stripping test. The test shall be conducted in accordance with AMCR 715-505, Volume 3, simultaneously with the function and casualty of the initial production sample.
- 4.4.13 Barrel erosion.— The test shall be conducted in accordance with AMCR 715-505, Volume 3, and the following: Firing in any barrel shall be terminated when either the drop in average velocity of an individual burst or the percentage of keyholing bullets in an individual burst exceeds the limits specified in 3.14.
- 4.4.14 Grain configuration.— The test samples shall be prepared and evaluated in accordance with MIL-STD-1170.
- 4.4.15 <u>Hardness testing</u>. The bullets shall be extracted, the propellant removed and the primers extracted. Each cartridge case of the sample shall be prepared and placed on the appropriate test fixture for testing in accordance with Federal Test Method Standard No. 151, Method 244.1.
- 4.4.15.1 <u>Case sidewall</u>. The average of the hardness values of the sample cases for each prescribed point along the sidewall exterior surface shall be computed and charted in accordance with the drawing requirements.
- 4.4.15.2 <u>Case head.</u> The sectioned halves of each sample case shall be marked in such a manner that both halves can be positively identified as being from the same case. The individual hardness value for each prescribed point on each sample case head shall be recorded. Any value failing to meet the drawing requirement at a prescribed point(s) shall be cause for remeasurement of hardness of the point(s) at the mirror image position on the second half of the sectioned head. The higher of the two measurements shall be recorded as the value of record for determination of conformance to drawing requirements.
- 4.4.16 <u>Defect penalty.</u> In any ballistic test except function and casualty, in which the occurrence of a firing defect listed in Table III prevents the obtaining of a reliable result for the characteristic being tested, an additional shot shall be fired. That particular test shall not be penalized, but the total ballistic sample shall be penalized for such defects in accordance with Table III.

5. PREPARATION FOR DELIVERY

5.1 Packing, Level A (Worldwide shipment) .- The cartridges shall be packed in accordance with Drawing F7553708, F7553747, F10521861 or F10535780.

5.2 Marking and labeling.— Packing boxes shall be marked and labeled in accordance with the applicable drawings cited in 5.1 or drawing F10535781, except that application of the NATO symbol of interchangeability to outer packages shall be in accordance with directions of the contracting officer, For symbol identification information, see drawings D10521856 and C10521857.

6. NOTES

- 6.1 Ordering data. Invitations for bids and contracts or orders will specify the following:
 - 6.1.1 Title, number and date of this specification.
 - 6.1.2 Type of packing.
- 6.1.3 provision for the supply, maintenance and disposition of mandatory ballistic test equipment for acceptance inspection purposes.
- 6.1.4 provision for the submission of acceptance inspection reports containing final inspection results for each lot of ammunition presented to the Government.
- 6.1.5 provision for the application and retention of NATO symbol of interchangeability cited in paragraph 5.2.
- 6.1.6 Provision for the identification and submission of grain configuration photomicrographs prepared in accordance with MIL-STD-1170 where such submission is required.
- 6.1.7 Requirement for contractor to provide and maintain an inspection system in accordance with MIL-I-45208, Inspection System Requirements.

6.2 Document availability.

- 6.2.1 Copies of MIL-STD-1170, required for evaluating grain configuration, may be obtained on a need to have basis through the Commanding Officer, U.S. Army, Frankford Arsenal, Philadelphia, Pennsylvania 19137.
- 6.3 <u>International agreements.</u> Certain provision of this specification are the subject of international standardization agreements listed below. When amendment, revision, or cancellation of this specification is proposed which will effect or violate the International Agreement concerned, the preparing activity will take appropriate reconciliation action through International Standardization channels including Departmental Standardization Offices, if required.

6.3 (Cont'd)

NATO STANAG	ABCA-ARMY-STD
2310	123
2315	130
2316	131
2320	124

Asterisks are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodian: Preparing activity:

Army - MU Army - MU

International Interest (See Section 6)

Project No. 1305-A562

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL		AL	OMB Approval No. 22-R255	
INSTRUCTIONS: The purpose of this form is to solicit beneficial comments which will help achieve procurement of suitable products at reasonable cost and minimum delay, or will otherwise enhance use of the document. DoD contractors, government activities, or manufacturers/vendors who are prospective suppliers of the product are invited to submit comments to the government. Fold on lines on reverse side, staple in corner, and send to are invited to submit comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements. Attach any pertinent data which may be of use in improving this document. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity.				
DOCUMENT IDENTIFIER AND TITLE				
NAME OF ORGANIZATION AND ADDRESS	CONTRACT NUMBER			
	MATERIAL PROCURE			
1. HAS ANY PART OF THE DOCUMENT CREATED PROB				
115F?				
A. GIVE PARAGRAPH NUMBER AND WORDING.				
			1	
B. RECOMMENDATIONS FOR CORRECTING THE DEF	ICIENCIES			
B. RECOMMENDATIONS FOR CORRECTING THE BETT				
2. COMMENTS ON ANY DOCUMENT REQUIREMENT CONSIDERED TOO RIGID				
Z. COMMENTS ON ANY BOSOMEN TO SEE				
3. IS THE DOCUMENT RESTRICTIVE?				
YES NO (II "Yes", In what way?)				
4. REMARKS				
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